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ABSTRACT

The report presents an evaluation model for early childhood programs for mildly and moderately handicapped children. The document examines the following four areas of early childhood special education programs: (1) methods of assessment, educational planning, and pupil evaluation; (2) program influence on five interrelated areas of development (social-emotional, physical, self-help, cognitive, and language); (3) parent involvement; and (4) administrative considerations. The evaluation procedures are intended to help determine whether a given program functioning within federal guidelines, and whether it is successful in lessening developmental deficits. (Author/PHR)

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An Evaluation Model for

Early Childhood Special Education Programs

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AN EVALUATION MODEL FOR EARLY CHILDHOOD SPECIAL EDUCATION PROGRAMS

RATIONALE

This model will be for evaluating early childhood programs for mildly to moderately handicapped children between the ages of two and five years. Any such model must have both subjective and objective origins. Subjectivity is involved in choosing what aspects of a program to evaluate, since these choices reflect one's personal educational philosophy and values. Consequently, that which merits considerable attention from one evaluator may be minimized or even ignored by another. However, once determinations are made regarding which areas to evaluate, objectivity is required in measuring program effectiveness in these areas.

Two subjective influences on the development of this model are discussed below, as a rationale for the model itself, which is presented later. One influence was the writer's belief in an eclectic theoretical base for early childhood programs for the handicapped. No single theory or philosophy is comprehensive enough to explain the complexities of human growth, learning, and development. Each has useful applications, as well as theoretical and practical limitations. Applying a single theory to exceptional children highlights its limitations. In so heterogeneous a population as special preschoolers, there will be exceptions to every theory's applicability.

Since most programs group children by developmental levels rather than handicapping conditions, a variety of abilities and disabilities are usually present in a single classroom. No single theory will encompass each of these children. Exceptional children have diverse educational needs, some of which are best met through structured, product-oriented methods, while others are best met through exploratory, process-oriented approaches. Each child will vary in the amount of structure or freedom he requires, depending on the nature of his handicap, his

his developmental level, and the nature of the teacher's learning objectives for him. Because of the assorted and special needs of these children, this writer believes an ideal program for them would synthesize the most practical, efficient, and educationally productive aspects of each philosophy. Such a synthesis would create a balance between structure and content on the one hand, and freedom and process on the other. This balance would allow the greatest flexibility in the kinds of experiences provided. In this writer's opinion, tailoring the program to each child's strengths and weaknesses will be more productive than providing only one approach within which every child must function.

Favoring an eclectic theoretical base is linked to a belief that the particular theory or philosophy of a program is secondary to its effectiveness in achieving specific and general educational goals. Therefore, the second subjective influence on the development of this model was the writer's opinion about what these goals should be. Broadly stated, the short-term goal of special preschool programs should be to prepare exceptional children to function in the least restrictive environment possible, both in and out of school. Likewise broadly stated, the long-term goal of such programs should be to maximize each person's potential for independence, self-reliance, and productivity. Whether overtly stated or indirectly implied, these goals should underlie the particular objectives of any special preschool program. Everything a program does should contribute to the ultimate attainment of these goals, but generally speaking, their attainment depends on two variables.

First, intervention must focus on the individual child, viewing him as an integrated whole and using his strengths to remediate or compensate for his weaknesses. A child's level of functioning in one area of development either enhances or impairs his performance in other areas. For example, a child who is physically or sensorially impaired may also have cognitive deficiencies, because his limited ability to interact with the environment allows him fewer opportunities to accumulate experiences and develop thought processes. Physical and sensory impairments

are related to deficiencies in language, self-concept, and social-emotional development as well. Conversely, normal physical and sensory functioning increase effectiveness in all of these areas. Recognizing the interrelatedness of these five areas of development is one important variable in program success.

The second variable which contributes to the attainment of educational goals is the inclusion of both product- and process-oriented activities. In this writer's opinion, process-oriented activities are preferred whenever possible, because they facilitate the acquisition of social skills, promote independence and initiative, maximize perceptual and conceptual development, and contribute to the construction of thought and language. However, there are certain skills and information that an exceptional child must be taught, through a more teacher-directed, content-oriented approach. These skill will vary depending on the nature of the handicap. For example, a deaf child requires instruction in the mechanics of both receptive and expressive communication. A blind child needs instruction in mobility skills. Emotionally disturbed children may require systematic contingencies on their social behavior.

These are only a few of the things that handicapped children cannot acquire through incidental learning or through participating in a program providing only child-directed activities. However, teacher-direction should not exceed the amount necessary for each child's attainment of otherwise unattainable knowledge or skills. To the maximum extent possible, special preschool programs should provide process-oriented opportunities for learning.

The model which follows will analyze specific interdependencies among areas of development. The relative emphases on product- and process-orientation in each of these areas will be determined by individual needs, rather than pre-established guidelines.

MODEL

As previously mentioned, an evaluation model is both subjective and objective origin. The subjective elements just discussed determined which program components would be evaluated in this model. These components are:

1. Methods of assessment and pupil evaluation
2. Program influence on five interrelated areas of development
3. Parent involvement
4. Administrative considerations

A separate discussion of each component will explain specific reasons for its inclusion in the model, and objective methods for its evaluation.

Methods of assessment and pupil evaluation

Formal assessment of each child prior to his placement in a special preschool program is invaluable to his educational progress. Careful assessment of individual needs must be made, using an interdisciplinary approach. The purposes of the assessment process should be 1) to determine the child's developmental level in the areas of language, cognitive, social, sensory-motor, and self-help skills; 2) to discover his particular strengths and weaknesses; and 3) to define the learning modalities best suited to his receptive and expressive abilities.

The assessment team should include a physician, a physical therapist, an occupational therapist, a speech/language therapist, a special educator, a diagnostician, a program administrator, a parent coordinator, and the child's parents. Each team member will contribute unique information regarding a particular area of the child's growth, development or learning. A synthesis of this information will yield a complete picture of the child's level of functioning, and will reveal how his functioning in one area impacts on other areas of his development.

Specific assessment procedures should include 1) paramedical screening for strengths or weaknesses in speech, vision, hearing, and motor abilities; 2) a

medical examination; 3) a personalized, detailed family history regarding factors which may have influenced the child's prenatal, perinatal, or postnatal development; 4) parental assessment of the child's present developmental level; 5) standardized testing; 6) a thirty-day in-class diagnostic period. The last two procedures, standardized testing and extended in-class screening, will be discussed in more detail.

Despite many practical and theoretical problems in using standardized tests with young children, they should be included in the assessment process for two reasons. First, no handicapped child may be legally enrolled in a special preschool program unless his need for services has been demonstrated via his performance on standardized tests. Second, since the assessment process is multidisciplinary and the results of these tests are not the only basis for determining a child's needs, any inaccuracies in their results will not distort the overall picture of his level of functioning.

The thirty-day in-class diagnostic period is to determine the child's developmental level as it relates to his functioning in the classroom. Extended assessment is always needed when working with exceptional children. A child's performance on one day's assessments does not reflect his potential cognitive capacity so much as it reflects his comfort in the situation, his previous exposure to similar tasks, his motivation to work, his interest in the specific material or activity, and his rapport with the examiner. Because these variables influence every type of classroom situation, and because they interfere with obtaining an accurate estimate of the child's potential, observation and assessment should be conducted in a variety of situations over an extended period of time. The cumulative results of this thirty-day process will provide a better indicator of the child's strengths and weaknesses than will his performance on a single day.

The data collected during extended in-class screening should be synthesized with the results of assessments by other team members into an individualized

educational plan (IEP), written by the assessment team. The IEP should contain these components:

1. A statement of the child's present developmental level, strengths and weaknesses, and specific educational needs.

2. A specific statement describing the child's learning style.

3. A statement of the developmental increments to be achieved in three months' time in each of five areas: social-emotional, physical, self-help, cognitive, and language.

4. A statement of instructional objectives, written monthly by the special educator, which must be measurable intermediate steps between the present level of performance and the quarterly goals.

5. A statement of specific educational services needed by the child, including all special education and related services, and any special instructional media or materials.

6. The date the services will begin, and the length of time they will be provided.

7. A list of individuals responsible for implementing the IEP.

Goals should emphasize process rather than product whenever possible. However, since concepts and understandings related to processing can only be inferred from a student's observable behavior, his achievement of objectives must be evaluated in terms of this behavior. Therefore, his IEP should list the behaviors he must demonstrate, and record the rate of acquisition of these behaviors.

The need for written behavioral objectives derived from multi-disciplinary assessment cannot be overemphasized in special education. They are critical to a special preschool program for several interrelated reasons. First, objectives do not inherently specify the instructional strategies to be used in their attainment. For a particular desired end, there are usually multiple means. Objectives provide a student's educational program with direction and ease of interpretation by others, while simultaneously allowing flexibility in its implementation. Second, these objectives assist the classroom teacher, both in tailoring the learning environment to each child's developmental level, and in monitoring his progress toward achievement of quarterly goals. Considering the wide range of abilities

and disabilities usually found within a single classroom, systematic record-keeping and on-going evaluation is needed to verify that the materials and activities provided are actually meeting every child's needs. Having written objectives facilitates this verification process. Along similar lines, the fact of accountability in special education makes written behavioral objectives advisable for the teacher's and program's own protection. Relying on guesswork, intuition, or memory in planning for each child renders them vulnerable to a malpractice suit. Written objectives, based on assessments and reviewed quarterly by the assessment team, assist in proving the appropriateness of a particular child's program.

An administrative argument for written objectives is that programs receiving federal funds must provide evidence of each child's progress within an individually-tailored program. Record-keeping facilitates this auditing process. Without written records, determining a program's future eligibility for funds would be a lengthy, expensive, if not impossible process. A final advantage of having written objectives is their value in program evaluation. By reviewing the objectives that each child met during one year in the program, administrators and teachers can pinpoint their own strengths and weaknesses regarding particular curriculum areas and/or categories of handicap. Ideally this information will be used in the future to revise and improve the program. From this discussion, one can see the importance of written behavioral objectives to children, teachers, and administrators in special preschool program.

Having discussed in detail the aspects of assessment and pupil evaluation considered important by this model, the methods of evaluating this program component will be explained. Briefly summarized, the important aspects of this component are 1) multi-disciplinary assessment, 2) multi-disciplinary formulation of an IEP containing written objectives, and 3) continuous monitoring of progress, including quarterly revision of goals by the assessment team and monthly revision of objectives by the special educator. Although implementing each aspect of this

component involves complex processes, evaluating each aspect is relatively simple. The needed information will be obtained by randomly selecting ten percent of the students' eligibility folders and examining the contents.

These folders contain records of all the assessments made of each child. If the results of standardized testing, the thirty-day diagnostic period, and three out of the other four assessment procedures are present in ninety-five percent of the folders examined, the assessment process will be evaluated as multi-disciplinary.

Eligibility folders also contain each student's individualized educational plan. Each participant in formulating an IEP signs his name and position on the assessment team on the last page of the IEP form. If the signatures of a special educator, a program administrator, the child's parents, and three or more of the other six team members are present on ninety-five percent of the forms examined, the formulation of IEP's will be evaluated as multi-disciplinary.

Continuous monitoring of students' progress can also be evaluated by inspecting the eligibility folders. Each time the assessment team meets to review a child's progress and formulate new goals, minutes are taken of these meetings. The minutes of these meetings, including the new goals and the signatures of participants in their formulation, are in the eligibility folders. So are copies of the monthly objectives written by the special educator, including the dates these objectives are met. This model will not attempt the lengthy and subjective determination of the appropriateness of these goals and objectives for individual children. It assumes that a program using a team approach to assessment, long-range planning, and pupil evaluation has enough built-in safeguards to ensure that each child's objectives fit his needs. Instead, it will only evaluate whether or not this team approach is actually in effect on a regular basis.

This evaluation will be made first by simply counting the number of times the assessment team meets to review each child. There should be minutes from at least

one meeting for every three months a child is in the program. For example, in a nine-month program, there should be minutes from at least three meetings per child. Ninety-five percent of the folders examined must contain these minutes.

In addition to counting the number of times the assessment team meets, this model will also evaluate who participates in the meetings. To be evaluated satisfactorily, all of the minutes in ninety-five percent of the folders inspected must have the signatures of a special educator, a program administrator, and the child's parents, and two of the three minutes must also be signed by three or more of the other six team members. Also, written objectives for each month of the program must be in ninety-five percent of the folders, with the dates these objectives are met.

Program influence on five interrelated areas of development

In addition to methods of assessment, educational planning, and pupil evaluation, this model will also evaluate special preschool programs' short-term influence on five interrelated areas of development. These areas are: social-emotional, physical, self-help, cognitive, and language. For purposes of the model, each area will be discussed separately, including how development in one area effects development in the other four, which components of each area will be evaluated, and how the evaluation will be done.

Generally, each component of a developmental area will be evaluated in terms of both teacher planning and child outcomes. The model assumes the latter to be a function of the former. In evaluating teacher planning, the model will examine:

1) basis for planning--Does each student have monthly objectives and written records of his progress in achieving these objectives?

2) evidence of planning--Are materials and activities chosen with individual objectives in mind?

3) appropriateness of planning--Do selected materials and activities actually facilitate achievement of these objectives?

The "basis for planning" and the "evidence of planning" will be evaluated by examining students' classroom folders. Within each classroom, the folders will be divided into two groups--one for students enrolled in the program for thirty-five days or less, and one for students enrolled in the program for more than thirty-five days. This distinction is made because thirty-five days or less is insufficient time for completing assessment and developing an IEP. Therefore, only the folders of students enrolled for more than thirty-five days will be evaluated. From this group, ten percent will be randomly selected from each classroom.

Within this sample, every folder must contain monthly objectives in each developmental area, and current records of the student's progress in meeting these objectives. These records may be in any written form, including charts, graphs, checklists, or anecdotal reports. In addition, every folder must contain individualized weekly plans, stating the materials and activities provided each week to facilitate attainment of specific objectives. The information obtained from this sample of classroom folders will determine whether the teachers' planning is compatible with each child's IEP. If ninety-five percent of all the folders examined meet the specific conditions described above, the program will be evaluated satisfactorily in this regard.

The model has thus far focused on evaluating the processes of assessment, IEP formulation, record-keeping, and teacher planning. However, it does not assume that these processes alone will guarantee desired child outcomes. These processes are not ends in themselves, but rather means to an end. Documenting the occurrence of the processes is not the same as proving any beneficial effects for the child. Just as a carpenter's skill cannot be judged by the number of tools he has, neither can a program's effectiveness be judged by the amount of paperwork it assembles on each child. A carpenter is evaluated on how he uses his tools to construct a house; likewise, a program must be evaluated on how it uses its "tools" to improve each child's level of functioning. It is the end result, the children's

progress, with which this model is most concerned. Assessment, record-keeping, and so on are necessary but not sufficient to ensure this result. Improved levels of functioning can only be ensured by using available information on each child to plan daily instruction appropriate to his needs. Whether or not daily planning is appropriate is determined by the child's progress in the program. Therefore, "appropriateness of planning" will be evaluated on the basis of child outcomes in each developmental area.

Social-Emotional Development

Social-emotional development impacts on all other developmental areas. The four dimensions of social-emotional development to be evaluated in this model are 1) children's self-concepts; 2) their acceptance of limits with regard to health, safety, and the rights of others; 3) the relative proportions of solitary, parallel, and cooperative play in which they engage; and 4) their opportunities for dramatic play.

A child's self-concept indirectly influences his physical, cognitive, language, and self-help skills. How he feels about himself determines in part his willingness and ability to interact with people and objects in the environment. A child with a healthy self-concept has the confidence to explore and experiment, and to risk making mistakes. He relies on his own ideas and feelings. He is motivated to attempt unfamiliar problems and to persist in finding solutions. All of these qualities contribute to his acquisition of social, physical, and logico-mathematical knowledge. In addition, they provide opportunities for developing fine and gross motor facility. Furthermore, feelings of self-worth and autonomy are prerequisite to the attainment of toileting, dressing, and feeding skills.

Teachers can cultivate healthy self-concepts through the kinds of experiences they provide in the classroom. Of primary importance is the availability of a variety of multi-level activities and materials, so that each child can experience

success on his forays into the environment. Among the available activities should be opportunities for constructive play, including art supplies, clay, boxes, blocks, and other building materials. This kind of play is important to the self-concept of exceptional children for two reasons. First, it allows them to make an impact on the environment by creating (and destroying) a concrete product. The experience of impacting on the environment is often unique to handicapped children, who are usually in the reverse role of having the environment impact on them. Exerting control over their surroundings is important to their development of confidence, self-reliance, and willingness to explore.

The second reason for providing constructive play for exceptional children is that it promotes self-expression and creativity, especially for non-verbal children. Again, the opportunity to produce a concrete product, uniquely one's own, encourages use of one's own ideas in experimenting with materials and solving problems related to design and construction.

In addition to the kinds of materials and activities she provides, the teacher can cultivate healthy self-concepts through the kind of classroom atmosphere she establishes. Although the specific components most conducive to developing self-concept are not known, it is generally accepted that a supportive, friendly environment is better than a negative, hostile one.

Teachers' efforts to promote healthy self-concepts will be evaluated on both the kinds of materials and activities they provide and the classroom atmosphere they establish. Evaluation of materials and activities will be done by randomly selecting one-third of the classrooms in the program for observation. Within each classroom, available materials will be divided into broad categories (e.g., manipulatives, constructive play, self-help, music, etc.). They will then be judged by three independent observers on the following qualities:

1) In each category, are there a number of different kinds of materials?

2) In each category, do most materials have multiple uses which would be apparent to a young child?

3) In each category, are most available materials suitable for use by children of varying levels of development?

4) In each category, are most of the materials "fail-proof"?

5) In each category, are there a variety of materials involving the visual, auditory, and tactile senses, or combinations of these?

6) In each category, do most of the materials provide feedback to the child?

The three observers' responses will first be compiled by classrooms. They will be recorded as either "yes" or "no." Next, the scores from every classroom will be compiled by categories. For the materials in a category to be evaluated satisfactorily, that category should receive at least twice as many favorable as unfavorable responses, when combined responses to all six questions are added together. This procedure will encompass the evaluation of materials in all developmental areas.

Evaluation of the classroom atmosphere's conduciveness to developing healthy self-concepts will be done by observing randomly-chosen ten-minute intervals in each classroom, and coding the occurrence of specified teacher behaviors. These behaviors may include the number of positive vs. negative comments made by the teacher to the students, the number of times the teacher smiles at the students, or a variety of other behaviors indicative of emotional supportiveness. Coding will be done by two independent observers who have attained at least ninety percent reliability. The criterion for this part of the evaluation will depend on what behaviors are coded. Overall, of course, there should be a minimum of hostile, negative behaviors and a maximum of friendly, positive behaviors when the proportions of each are compared.

Evaluation of child outcomes related to self-concept will be done through pre- and posttesting of a stratified random sample of twenty percent of the students in the program. Each stratum in the sample will be composed of children with a particular handicapping condition. The instruments to be used are 1) the Curiosity, Innovative Behavior, and Persistence subtests of the Cincinnati

Autonomy Test Battery (CATB), to be administered following each of two successive program years by a diagnostician, and 2) Developmental Profiles, a subjective evaluation to be done jointly by two adults having regular contact with the child. Developmental Profiles rates the child on self-awareness, self-confidence, interpersonal competence, sensitivity to others, effectiveness, and tolerance. Each child's pretest ratings will be made at the end of one program year. His posttest ratings will be made by two different adults at the end of the following program year. The posttest raters will have no prior knowledge of the child's pretest results.

The criterion for the CATB will be improvement by each child on every subtest for which he has not already reached the ceiling score. On the subtests where he has reached the ceiling score, the criterion will be maintenance of this score from pretest to posttest. The criterion for Developmental Profiles will be significantly improved ratings for every child from pretest to posttest. In addition, scores and ratings will be compared across categories of handicaps to evaluate the programs' effectiveness in enhancing the self-concepts of each group specifically.

An exceptional child's acceptance of limits with regard to health, safety, and the rights of others is important to establish in early childhood. His and others' personal well-being and his acceptance by his peers require him to exercise self-control in these areas. Eventually his understanding of cause-and-effect and reciprocity will assist him in internalizing these limits. In the meantime, however, he must be helped to remember them through the use of consistent consequences for their violation. This consistency is required, so the child can relate his behavior to its immediate, predictable effects within the environment.

Evaluation of the effectiveness of limit-setting will consist of three parts: 1) Are reasonable limits set on behavior? 2) Do children function for the most part within these limits? 3) Is violation of these limits consistently followed by consequation?

It should be mentioned that this model is not concerned with evaluating day-to-day classroom management, because the methods vary so greatly from one program or teacher to the next. Most inappropriate behaviors can be handled in a variety of ways, including punishment, use of ignoring strategies, or allowing the natural consequences of the behavior to follow. How the majority of these behaviors are dealt with depends on the program's philosophy. However, in any classroom, there must be teacher-imposed and -enforced limits on certain behaviors that jeopardize health or safety or seriously infringe on another's rights. Only a negligent teacher would fail to intervene when these types of behaviors occur. The model recognizes that different programs or teachers will vary in the number of behaviors they would include in this category. For example, some might believe that one child's taking a toy from another merits teacher intervention, while others might prefer letting the children reach their own settlement. Regardless of these differences in interpretation, however, every classroom has some degree of teacher-made limits on certain kinds of behaviors. Because these limits are common to every program, they were chosen for evaluation by this model.

Are reasonable limits set on behavior, with regard to health, safety, and the rights of others? "Reasonable" has an intentionally vague meaning, because it will vary with the children's levels of functioning and with the programs' philosophies regarding internal vs. external control. In general, the intent of this part of the evaluation is to determine that teachers do have limits on certain kinds of behaviors, and a method for reminding students of these limits. These determinations will be made through teacher questionnaires. Each teacher should be able to describe specific limits on behaviors in her classroom, and to tell how she communicates these limits to her students and what consequation she uses for their violation.

Do children function for the most part within these limits? Is violation of these limits consistently followed by consequation? In this part of the evaluation,

the teachers' questionnaires will be used as observation guides during three ten-minutes time periods, each in a different instructional setting and on different days. Using the limits each teacher named and the plan she uses for reminding students of these limits, two independent observers will code the number of transgressions, and what teacher behaviors follow these transgressions. If teachers have been effective in setting limits, children should violate them less than five percent of the time. Violations should be consequated from ninety-five to one hundred percent of the time. If ninety percent of the teachers and children meet these criteria, the program will be evaluated satisfactorily on this aspect of social-emotional development.

The proportions of solitary, parallel, and cooperative play in which children engage were chosen for evaluation because a handicapped child's development of higher-level play skills is frequently impaired and in need of intervention. An exceptional child generally will not attend well or imitate readily, and therefore does not display the kind of social awareness typical of normal children. Solitary play occurs frequently, but this type of play is a very primitive stage of social development which provides only sensory feedback from inanimate objects. Affective feedback cannot be gained until children begin to interact.

Unfortunately, however, only limited cooperative play or social interaction among peers is observed in young disabled children. This deficit grossly impedes the development of communication skills, and minimizes play as a potent medium of social development. Moreover, it is generally accepted that if social interaction is not encouraged at a young age, the long-term outlook for competent social behavior is poor. Evaluating the relative proportions of each kind of social play will indicate whether or not a program is enhancing children's social development.

This evaluation will be done on a pretest-posttest basis, using the same twenty percent sample of children who were evaluated on their development of healthy self-concepts. For both pre- and posttesting, each child will be observed during

ten minutes of free play. His social play behavior will be coded by two independent observers, using the code developed by the Experimental Education Unit at the University of Washington. The criterion for satisfactory evaluation will be a significant overall decrease in the amount of solitary play, and significant overall increases in the direction of cooperative play. Again the results will also be compared across categories of handicaps, to determine program effectiveness in promoting the social development of each specific group.

The fourth dimension of social-emotional development to be evaluated, dramatic play, is related to each of the other three. Dramatic play can strengthen a child's self-concept by allowing him to experiment with ideas and feelings in a non-threatening, ludic context; by letting him pretend to relive pleasant experiences or change the outcomes of unpleasant ones; and by permitting him to assume an identity different from his own to overcome shyness or fear. It can help him accept and remember limits by practicing them in imaginery situations, or by violating them in these same situations without fear of natural or external consequation. In addition, dramatic play can supply a range of possibilities for varying degrees of social interaction.

Dramatic play materials will be considered as a category of materials in the evaluation procedure described earlier. Children's use of the materials will be observed and coded at the same times and using the same sample as was used in evaluating types of social play. The results will be computed separately, and compared with the results of self-concept and social play evaluations, to determine whether or not the amounts of dramatic play were related to improvements in these areas.

Physical Development

Like social-emotional development, physical development also impacts on other developmental areas. For example, a child's competence in exploring the environment

determines the quality of the experiences from which he constructs thought and language. In addition, physical health and skill largely determine how others view the child, and how he views himself. He may be either capable, autonomous, and effective, or incompetent, dependent, and weak. Whichever value he accepts will influence his social-emotional development. Furthermore, physical development is related to the development of self-help skills, which also relate back to self-concept. The dimensions of physical development which this model will evaluate are 1) fine motor skills; 2) gross motor skills; 3) the availability of physical and occupational therapists; and 4) general child health.

Fine motor skills include the use of scissors, crayons, fasteners, and utensils. They were chosen for evaluation because they are the foundations for either writing or self-help skills. Fine motor development will be evaluated in terms of both materials and child outcomes. The procedure for evaluating materials was described in a previous section of the model. Child outcomes will be evaluated through pre- and posttesting of a randomly selected male and female from each category of handicap. Evaluation will be based on a developmental checklist of fine motor skills, containing items from a variety of sources. Criterion will be improvement for each child in the sample, and an overall gain of at least half the number of months the children are in the program, for both boys and girls, across categories of handicap.

Gross motor skills include walking, running, jumping, hopping, and some perceptual-motor skills such as balancing, throwing, and catching. They were chosen for the model because of their contribution to large muscle development. Large muscle facilitates both independent mobility and the physical skill and coordination required for many team and individual games. Mobility in the environment and physical coordination contribute to increasingly effective interactions with objects and people, and to enhanced self-concept.

Gross motor skills will be evaluated on the basis of materials, playground

facilities, and child outcomes. Materials will be evaluated as previously described. Evaluation of playground facilities will be discussed in a later section of the model. Child outcomes will be determined using the same sample of children as for fine motor skills. Evaluation will be based on a developmental checklist of gross motor skills, containing items from a variety of sources. Criterion will be the same as for fine motor skills.

Both gross and fine motor skills development will be benefitted by regularly scheduled sessions with occupational and/or physical therapists experienced in working with young children. These two professionals can provide specialized treatment of particular motor problems, which a classroom teacher lacks the expertise to diagnose or correct. Because of the high prevalence of motor problems in exceptional children, and the importance of motor development to so many other areas of functioning, the availability of therapists is critical to a program focusing on the total child. Therefore, this model will evaluate whether or not therapists are present in adequate numbers and with sufficient regularity to meet a program's needs.

Determining program needs will be done by compiling lists from the eligibility folders of students whose assessments revealed a need for therapy. Assuming that each session will last thirty minutes, thirty will be divided into the number of minutes in the school day to determine the number of sessions possible in one day. That number will be multiplied by five to find the number of weekly sessions possible. The number of weekly sessions will be divided by two to find the number of children who can be served on a semiweekly basis by one therapist. This number will be multiplied by the number of therapists in the program, to determine the number of children that can be served effectively. If this number is greater than or equal to the number of children needing services, the program will be evaluated satisfactorily.

In addition to motor development, a special preschool should also be concerned with the general health of its children. Some exceptional children are from homes where poverty or ignorance preclude needed health practices such as adequate nutrition,

sanitation, and routine medical care. Others are from homes where parents work long hours and may not have sufficient time or energy for attending to children's physical needs. In still other homes, children rather than adults decide on what to eat, when to go to bed, when to take a bath, and other factors related to general health care. For these and a variety of similar reasons, many preschool children are unhealthy. Their health problems concern educators for two reasons. First, absenteeism is high, and second, when the children are in school, they lack the vitality and attentiveness to benefit optimally from the experiences provided.

Because there is a relationship between health and learning, this model will evaluate special preschool programs on their procedures for safeguarding children's health. In doing so, the model does not assume that the school can replace the home in this role. Because of the many variables beyond the school's control, child outcomes will not be assessed for this dimension of physical development.

As previously mentioned, each child receives a complete medical examination during the assessment process, which can be verified by inspecting the eligibility folders. In addition, each child should be required to have standard inoculations against all communicable diseases and be current on his boosters, as evidenced by written records from a doctor. Besides these medical safeguards, the program should also include a system for adults working directly with the children to monitor their health status and make referrals when necessary. These referrals may be for eye or ear examinations, dental checkups, treatment of chronic health problems, child abuse, inadequate clothing, or any other health-related need. Ideally there will be contacts in the community who will provide needed services free or at reduced prices. Documenting this process will consist of examining written records of its occurrence. These records should contain the date of the referral, the reason for the referral, and what action was taken by the program staff or the child's parents as a result of the referral.

In addition to these remedial procedures, the program should also take preventive

measures to safeguard children's health. Previously mentioned was the need for limits with regard to health and safety. Providing a quiet time each day for children to rest or sleep is also important, as is serving nutritious food. Each meal the program serves should have at least one food from each of the four basic food groups, and at least one-third of the nutrients a young child needs each day. If only snacks are served, they should also be nutritious foods, rather than empty calories. Evaluating the nutritional value of foods the program serves will be done by examining either copies of the program's menu or samples of the food itself.

Development of Self-Help Skills

Self-help skills refer to one's ability to care for his physical person. The ability to provide for one's basic self-care needs is fundamental in achieving self-sufficiency and independence. Attainment of this ability is usually delayed in exceptional children, because of delays in related areas. Both cognitive and motor functioning can inhibit or promote the attainment of self-help skills. Also of importance is the interdependence of these skills with social-emotional development.

A child who perceives himself as competent and assertive furthers his independence by performing self-care. As he acquires and refines needed skills, he realizes increased control over internal and external events. He also receives approval and encouragement from significant adults. The combination of intrinsic and extrinsic gratification motivates him toward further acquisition and refinement of skills, which in turn provides increased gratification, and so on. A healthy self-concept is both a stimulus for and a product of developing self-help skills. Likewise, a poor self-concept is both an inhibitor of self-care, and a product of failure to develop needed skills.

In addition to their reciprocal relationship with self-concept, self-help skills also influence socialization. For example, parents of a child who lacks

toileting skills may not take him with them to public places or to friends' homes. A child who cannot feed himself may be fed in the classroom while his classmates are in the cafeteria. At home, he may also be fed separately, before or after the rest of the family has its meal. Because of a discrepancy between others' expectations and his abilities, or because of the additional time and special effort required of others in meeting his needs, a child who lacks self-care skills may be isolated from many valuable social experiences.

A related reason for developing these skills is that many children in special preschool programs will eventually be mainstreamed into regular kindergarten or elementary classrooms for at least part of the school day. Their success in regular education will depend to a large extent on the degree of "normalcy" they exhibit to teachers and classmates. Taking care of their own basic needs is one way these children can be like others in the class.

The self-help skills to be evaluated in this model are toileting, dressing, feeding, and grooming. The program will be judged both on the opportunities it provides for children to practice these skills, and on actual child outcomes. Opportunities for practice will include:

--the size, number, and location of the toilets
--the establishment of daily toileting routines, as well as chances for children to perform toileting skills on their own
--the availability of a variety of fasteners to manipulate
--the provision of special clothing and assistance with clothing for children with physical handicaps
--chances to dress and undress themselves or dolls
--appropriately-sized tables and chairs
--a variety of foods, including both finger foods and foods to be eaten with spoons or forks
--specially designed plates, cups, and utensils for more severely-involved children
--at least one child-sized sink per classroom
--at least one full-length mirror per classroom
--toothbrushes and combs for each child
--any other facilities or materials which will contribute to self-care

These opportunities will be evaluated through ch icklists, to be completed by two independent observers. All of these opportunities should be available in at least ninety percent of the classrooms.

Child outcomes on self-help skills will be evaluated in two ways. First, each child in the sample evaluated for fine and gross motor skills will be administered pre- and posttests of the self-help checklists from the Learning Accomplishment Profile. Criterion will be an improvement in self-care skills for each child in the sample, and an overall gain of at least half the number of months the children are in the program. These gains will be evaluated for all self-help skills at levels below each child's chronological age, for both boys and girls, across categories of handicap.

The second evaluation of self-care skills will be through teacher and parent questionnaires, to be completed for each child in the sample at the end of the program year. The questionnaire will ask teachers and parents to evaluate the children on the same skills contained in the LAP checklists. Responses on the questionnaires will be compared to posttest results from the LAP to determine the consistency of children's performance between school and home. In at least ninety percent of the cases, home performance should equal or exceed school performance.

Cognitive Development

Cognitive development refers to identifiable modes of experiencing and responding that are associated with increasing chronological age. According to Piaget, there are four stages in this development: the sensorimotor stage, the preoperational stage, the stage of concrete operations, and the stage of formal operations. These stages are cumulative, each becoming a subset of the one which follows it. As a child progresses through each stage, he develops increasingly complex thought processes, ranging from overt actions in the sensorimotor stage to formulating hypotheses in the stage of formal operations.

The progression of these stages is related not only to age, but also to experiences, which a child accumulates through opportunities for interaction with his environment. Because each child is an integrated whole, the quality of these

interactions is determined by his levels of functioning in all areas of development: sensory-motor, cognitive, language, and social. Impairment in one or more of these areas often renders an exceptional child less effective in his interactions than other children his age. Therefore, he does not have the kinds of experiences required for the development of thought processes comparable in complexity to theirs.

To compensate for this developmental delay in exceptional preschoolers, this model emphasizes improving each child's overall development, using his areas of strength to remediate his areas of weakness. Remediation of weaknesses will facilitate more effective interaction between the child and his environment. This interaction will provide him with more and better experiences, from which to develop increasingly complex thought processes.

Development of these processes in early childhood is accomplished primarily through play. Therefore, this model will evaluate special preschool programs on the indoor and outdoor play materials they provide, on the playground itself, and on the relative proportions of free play vs. other kinds of classroom activities, as well as on child outcomes in the cognitive domain.

The procedure for evaluating program materials was explained in an earlier section of the model. Because cognitive development is related to all the kinds of experiences a child has, all of the materials he interacts with are "cognitive" to some extent. Therefore, a separate category for cognitive materials will not be included in the evaluation procedure earlier described. Instead, the combined evaluations of materials from other categories will be the basis for evaluating materials in this domain.

Playgrounds will be evaluated on three general criterion--safety; opportunities for all kinds of play; and the appropriateness of equipment, activities, and materials to the developmental levels of children in the program. Each of these areas will be evaluated separately by three independent observers--a playground

consultant, a parent representative, and a specialist in child development. They will use checklists of specific objective items for each area of evaluation. For example, in the area of safety, the checklist will have items about the kinds of surfaces under moving equipment; the distances between pieces of moving equipment, or between moving and stationary equipment; the presence of a fence around the playground if it is near a street, and so on. For kinds of play, the items will examine the availability of different kinds of gross motor activities; the accessibility to children of stored materials, such as hammers, paint, and tricycles; the zoning of different spaces for different uses, so one kind of play will not interfere with other kinds, and so on. In the area of appropriateness to children's developmental levels, the checklist will include items about the size and scale of the equipment; the degrees of challenge it contains; the diversity of experiences it offers; its potential for adaptability to a variety of handicaps, and so on.

The observers will rate each item on the checklist from one to five, with one being "poor," and five "excellent." When the checklists from each area are compiled, a mean for each item will be tabulated separately, and the total of these means for each area will be obtained. From this total, a new mean will be computed which will represent all three observers' combined rating for that area. This combined mean should be 3.75 or above in all three areas of evaluation.

In addition to evaluating program materials and the playground, this model will also evaluate the opportunities children have for playing. By including this section under the heading of cognitive development, the model does not assume that it is the only area of functioning influenced by play. Instead, it recognizes that play has positive value for all areas of functioning. In fact, it is precisely this impact on the total child which makes play so valuable in cognitive growth. By improving the child's skills in other areas, play enriches the quality of his interactions with the environment. The experiences he acquires through these interactions underlie the development of thought processes.

Evaluation of children's opportunities for play will be made through examination of lesson plans and class schedules, and through direct observation in randomly selected classrooms. The criterion for evaluation will be the relative proportions of exploratory, child-chosen, child-directed activities vs. structured, teacher-initiated, teacher-directed activities. As previously discussed, this model favors including both structured and unstructured times in each school day, with the exact proportions of each varying from child to child to accommodate his specific handicap. In general, however, ludic, process-oriented activities should have precedence over product-oriented ones, in a ratio of about two-to-one on the average.

In evaluating child outcomes in the cognitive domain, it must be remembered that internal processes can only be inferred from observable behaviors. Therefore, evaluation must be done in terms of these behaviors. In this model, a random sample of ten percent of the children in each class will be pre- and posttested using the McCarthy Scales of Children's Abilities. These scales are a general cognitive index for ages 2.5 to 8.5. They include scores for verbal, quantitative, and perceptual performance, as well as memory and motor development. Criterion will be improved scores for each child in the sample, as well as an overall gain equivalent to at least half the number of months the children are in the program.

Language Development

Language development includes both receptive and expressive skills. It is related to all other areas of functioning, especially to cognitive. In fact, the reciprocal relationship between cognitive and language development in essence makes each a subset of the other. Language depends on the acquisition of perceptual, conceptual, and classification skills. Like other cognitive skills, these prerequisites to language develop through the child's interactions with the environment. Therefore, his experiences determine not only his cognitive development, but indirectly, his language development as well.

Experiences build the conceptual base of which language is a tool. Through the use of language, the child can transform concrete experiences into symbols, first spoken and then written. He can reflect on experiences and communicate about them with others. He is freed from the necessity of manipulating concrete reality, and enabled to manipulate concepts and ideas. Through these internal manipulations, he can construct more complex thoughts and images.

In addition to its interrelationship with cognitive development, language is also related to physical, motor, sensory, and social functioning. Impairment to any one of these systems impedes, by varying degrees of severity, the exceptional child's acquisition of language skills. The inability to communicate effectively with adults and peers during childhood often has lasting effects on his life adjustment potential. Furthermore, inadequate listening and speaking skills preclude later success in reading and writing. For all of these reasons, a special preschool program should effectively promote both receptive and expressive language abilities.

This model will evaluate programs' effectiveness in language development along five dimensions: 1) children's opportunities for play; 2) the proportions of child-to-child, child-to-adult, and adult-to-child conversation; 3) the availability of professionals trained in speech and language therapy; 4) child outcomes in receptive language; and 5) child outcomes in expressive language.

Evaluating children's opportunities for play was discussed in the preceding section on cognitive development. It is considered again under language development for three reasons. First, play is the primary vehicle of cognitive development, which is reciprocally related to language acquisition. Second, play is a natural medium for child-to-child and child-to-adult verbal interactions. It encourages spontaneous speech about personally meaningful experiences in a relatively risk-free context. Third, because it facilitates these verbal interactions with others, play also develops language as a social tool. For these three reasons, play is critical to the language domain, and is therefore included again in this section

of the model.

The proportions of child-initiated vs. adult-initiated conversation will be evaluated through observation and coding for fifteen-minute intervals in randomly selected classrooms. Coding will be done by two independent observers. Criterion will be a two-to-one ratio of child-initiated to teacher-initiated conversation. In addition to coding who initiates conversations, the observers will also code the kinds of verbalizations which occur (e.g., asking a question, making a statement, giving a direction, expressing a need, etc.). These results will be examined to determine the specific uses of language within each category.

The availability of professionals trained in speech and language therapy is essential to a special preschool program. In addition to an entire group of children whose primary handicap is language-related, many other students have secondary speech or language deficits caused by cerebral palsy, mental retardation, deafness, and other conditions. These children require specialized services that the classroom teacher generally cannot provide. Therefore, this model will evaluate whether or not therapists are available in adequate numbers and with sufficient regualrity to meet the needs of the program. Evaluation procedures will be the same as the ones used for physical and occupational therapists (see Physical Development).

Child outcomes in receptive and expressive language will be measured through pre- and posttesting the same sample of children used to evaluate cognitive development. Receptive language will be evaluated with the Ammons Full Range Picture Vocabulary Test, and the verbal comprehension subtest of the Reynell Developmental Language Scales. Expressive language will be evaluated with the Verbal Language Developmental Scale, and the expressive language subtest of the Reynell Developmental Language Scales. Criterion will be improvement for each child in the sample, and an overall gain equivalent to at least half the number of months the children are in the program.

This section of the model has dealt with evaluating programs' short-term influence on five interrelated areas of development. These areas are social-emotional, physical, self-help, cognitive, and language. Because each child is an integrated whole, outcomes in one of these areas will either enhance or retard his functioning in others. A variety of evaluative methods will be employed in determining these outcomes. The purposes of evaluating them is to judge programs' effectiveness in developing the total child over a period of one year.

Ideally, a longitudinal study will eventually be undertaken, to determine programs' long-term effects on former students who have reached school age. This study will re-examine children's levels of functioning in each developmental area and analyze the restrictiveness of the educational environments in which they have been placed. The purposes of this study will be to judge 1) whether most gains made by students during their time in the program have been maintained; 2) whether the program ameliorated developmental deficits to the extent that most children function on comparable levels with their "normal" peers; and 3) the extent to which the program prepared most children for mainstreaming, for at least part of each school day. Specific details of the design of this study are not included in this model.

Parent involvement

Cooperation between the home and the classroom will maximize the effectiveness of special preschool programs. By evaluating opportunities for comprehensive parent involvement, this model recognizes the centrality of parents' roles as educators of their children, and the need for parents' input in all stages of the educational process. Four areas of parent involvement will be evaluated in this model:

1) Parents' contributions to assessment and the formulation of IEP's were discussed in a previous section of the model. Participation in these two processes is the minimum acceptable amount of parent involvement in a program. Documenting

parents' participation will be done by inspecting a randomly selected ten percent of students' eligibility folders for these three things: a written family history regarding factors influencing child development; a written parental assessment of their child's present level of functioning; and parental signatures on all three copies of the quarterly goals established for their child. Ninety-five percent of the folders examined must contain all three of these things.

2) The program's parent coordinator will be evaluated using a two-part checklist. The first part of the checklist will evaluate his or her educational background and field experience in the areas of adult education, counselling, social services, early childhood education, and special education. Information for this part of the checklist will be obtained through interviews with a program administrator and the parent coordinator. The more training and experience the parent coordinator has in each area, the higher the number of points he will receive on the first part of the checklist.

The second part of the checklist will evaluate the parent coordinator's actual role in the program. It will determine whether or not he has a separate position on the staff, and will examine the kinds of parent services he provides. Information for this part of the checklist will also be obtained through interviews with a program administrator and the parent coordinator. In addition to these interviews, mini-checklists will be administered by telephone to a random ten percent sample of parents, regarding services they have obtained through the parent coordinator since entering the program. The more services the parent coordinator offers to parents, the higher the number of points he will receive on the second part of the checklist. The total number of points obtained on both parts of the checklist will be converted to percentages of the total number possible to obtain. A criterion of at least seventy-five percent will be required for satisfactory evaluation of the parent coordinator.

3) Parent participation in their child's classroom instruction will be evaaluated

in two ways. First, the proportion of aides who have children in the program will be determined. The higher the proportion, the better the rating a program will receive, on a scale of one to five. Second, questionnaires will be mailed to a sample of parents not participating in classroom instruction. The purpose of this questionnaire will be to determine the factors influencing their nonparticipation. Responses will be evaluated specifically on whether or not these parents feel their participation in the classroom is valued and desired by the program staff. The greater the number of unfavorable responses along these lines, the lower the rating a program will receive, on a scale of one to five. The mean of the two ratings will be the program's overall score on this dimension of parent involvement. A minimum criterion of three will be required for a satisfactory rating.

4) Parents' opportunities to develop home teaching strategies will be primarily a function of the parent coordinator's effectiveness. Therefore, this dimension of parent involvement will be evaluated through interviews with a program administrator and the parent coordinator, and through telephone interviews with the same sample of parents who provided information on the services they have obtained from the program. The purpose of the telephone interviews will be to judge 1) parents' desire to work with their children at home; 2) their awareness of program assistance in developing home teaching strategies; 3) their use of this assistance in extending classroom objectives into the home. Responses to both sets of interviews will be compared to determine program effectiveness in 1) providing opportunities which parents desire; 2) communicating these opportunities to parents; and 3) involving parents in home teaching activities realistic to their situation.

As mentioned briefly in an earlier part of this section, parent participation in assessment and IEP formulation are all that is required of a program by this model. However, the model does provide for the evaluation of other areas of parent involvement, for programs with a more comprehensive approach. Although this degree of parent participation is not required for a satisfactory evaluation, it is preferred

from the perspective of enhancing the functioning of the total child. Parents provide the first and greatest influence on all areas of their children's development. Excluding them from any aspect of the educational process deprives the program, the parents, and the child of a valuable partnership.

Administrative considerations

The final section of this evaluation model will examine two administrative considerations: the adult/chid ratio, and the scheduling of sufficient time for planning and record-keeping.

The adult/child ratio is important to a program's success for four reasons. First, a small number of children per adult allows greater individualization of classroom instruction. Second, having few children per adult facilitates classroom management and allows greater consistency in the consequation of limit-violations. Third, the more professionals who work with a child, the more objective and accurate the basis for evaluation and planning. Fourth, the availability of a variety of professionals allows greater specialization, and hence, greater effectiveness in meeting individual needs. This model will evaluate a program's adult/child ratio by dividing the number of adults having direct contact with children by the number of children in the program. Criterion will be at least one adult for every eight children.

Scheduling of sufficient time for planning and record-keeping is essential to a special preschool program, because of the substantial amounts of each which must necessarily occur. Documenting the processes of assessment, IEP formulation, and IEP review is required for purposes of funding and accountability. Written monthly objectives, individualized weekly planning, and on-going pupil evaluation are integral parts of each child's personally-tailored educational program. Keeping abreast of all of these processes requires that time for planning and record-keeping be regularly scheduled. Criterion in this model will be a minimum of five hours

per classroom per week, with an additional two hours during one week out of each month. Evaluating the availability of this time will be done by inspecting a copy of the program's daily and monthly schedules.

Summary

The foregoing model is for the evaluation of early childhood programs for mildly to moderately handicapped children. It examines four major components of these programs in some detail. These components are:

1) Methods of assessment and pupil evaluation
2) Program influence on five interrelated areas of development
3) Parent involvement
4) Administrative considerations

A variety of evaluative methods are employed, including examination of program records, observation, coding, developmental checklists, standardized tests, and interviewing strategies. The results of these evaluations will be used to determine if a program is functioning within federal guidelines, and if it has positive value in ameliorating developmental deficits. Each program that is evaluated will receive a report describing the methods used, interpreting the results of each method, and making recommendations for improvements where indicated.

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